Daniel Swartz <kuka@freemail.hu> on 10/12/2001 10:59:47 AM

Please respond to kuka@freemail.hu

To: YMP_SR@ymp.gov
cc:

Subject: yucca mountain

Part of Records Package / Supplement / Correction

October 11, 2001
Carol Hanlon
U. S. Department of Energy
Yucca Mountain Site Characterization Office
(M/S #025)
P.O. Box 30307
North Las Vegas, Nevada 89036-0307
Comments on the Secretary of Energy's "Possible Site Recommendation for Yucca Mountain," Nevada, for Development as a High-Level Nuclear Waste Repository
Dear Ms. Hanlon:
Nuclear Information & Resource Service/World Information Service on Energy (NIRS/WISE) is the international information and networking center for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy issues. NIRS/WISE has members across the United States who are concerned about the U.S. Department of Energy's (DOE) Yucca Mountain Project. Our comments on the Secretary of Energy's preliminary recommendation of Yucca Mountain for development as a high-level nuclear waste repository follow.
Stolen Land: Yucca Mountain Project violates Treaty of Ruby Valley.
In 1863, the United States government signed a "treaty of peace and friendship" with the Western Shoshone Indian Nation. This treaty recognized Western Shoshone title to "Newe Sogobia," lands spanning what is now almost the entire State of Nevada, including Yucca Mountain and Death Valley, California. Treaties with sovereign nations, according to the U.S. Constitution, represent the highest law of the land, equal in stature to the Constitution itself. The Western Shoshone National Council is adamantly opposed to the dumping of high-level nuclear waste at Yucca Mountain. A recommendation from Energy Secretary Abraham to go forward with the Yucca Mountain repository would literally be groundless, for it would violate Western Shoshone treaty lands, as well as environmental justice principles.
The Cart Before the Horse:
DOE's preliminary site recommendation is woefully premature.
How can the DOE consider site recommendation at this time when numerous key analyses and regulations are incomplete?
The Final Environmental Impact Statement (FEIS), required under the Nuclear Waste Policy Act (NWPA) and National Environmental Policy Act (NEPA), has not been issued. DOE has not responded to more than 11,000 comments on the Draft Environmental Impact Statement (DEIS). To ask the public to give final comments on the Yucca Mountain proposal when their DEIS comments, submitted one and a half to two years ago, have not been responded to is patently absurd, flies in the face of meaningful public participation, and is a violation of due process and federal environmental and nuclear waste laws.
Similarly, key U.S. Nuclear Regulatory Commission (NRC) documents required for a Yucca Mountain site recommendation have not been published. The NWPA requires NRC to determine whether DOE can reasonably apply for a license to construct and operate the proposed repository. This "sufficiency review" has not been published. Rather, NRC has identified errors and inaccuracies in DOE's analyses which have yet to be corrected. Also, NRC's proposed site-specific licensing rule for the Yucca Mountain repository has not

been finalized. Public comments submitted over two years ago by NIRS and numerous other organizations and concerned citizens on the proposed changes to the NRC repository licensing rule have never been responded to by the NRC. Many comments expressed strong opposition to NRC's attempt to weaken its generic repository licensing rule in order to accommodate the unsuitable Yucca Mountain site.

Changing the Rules in the Middle of the Game:

Lowering hurdles, weakening environmental protections, gutting regulatory standards, to keep an unsuitable site moving forward.

For DOE to recommend going forward with the Yucca Mountain Project, it would seem appropriate that the site should have to live up to DOE's own Repository Siting Guidelines. But Yucca Mountain cannot live up to DOE's nearly 17-year-old and still-current Siting Guidelines (Federal Register, Thursday, December 6, 1984, Department of Energy, 10 Code of Federal Regulations, Part 960: Nuclear Waste Policy Act of 1982; General Guidelines for the Recommendation of Sites for the Nuclear Waste Repositories; Final Siting Guidelines). To overcome that "showstopper," DOE simply proposes a last-second change to its own guidelines.

Nearly three years ago, at the end of 1998, NIRS and over 200 other safe energy, environmental, and public interest organizations petitioned then-Energy Secretary Bill Richardson and the DOE to disqualify Yucca Mountain from any further consideration for the national dump because the site violated DOE Siting Guidelines.

DOE's Siting Guidelines state "A site shall be disqualified at any time during the siting process if the evidence supports a finding by DOE that a disqualifying condition exits..." (10 CFR 960.3-1-5). DOE Guideline Section 960.4-2-1, Post-Closure Disqualifying Condition for Hydrology, states "A site shall be disqualified if the pre-waste- emplacement ground-water travel time from the disturbed zone to the accessible environment is expected to be less than 1000 years along any pathway of likely and significant radionuclide travel."

In 1996-97, DOE analyses of samples collected deep underground in the Yucca Mountain Project Exploratory Studies Facility revealed that in less than 50 years, rainwater had percolated down through Yucca Mountain's severely fractured and fissured rock all the way to the level of the proposed repository and beyond, toward the water table below. DOE's own models for water flow through rock above the water table (the "unsaturated zone") -- combined with the finding of rainwater less than 50 years old at the level of the proposed repository, and other data -- indicate that, within acknowledged bounds of uncertainty, rain and groundwater percolating down through the level of the repository will reach the water table relatively quickly. According to "saturated zone" (water table) water flow models, travel time to a point at which it is accessible to humans through water wells is less than 1,000 years.

NIRS' December 1998 petition pointed out that this finding met the conditions for disqualification, and that DOE must disqualify Yucca Mountain from any further consideration. For DOE to do otherwise would risk water corroding waste containers and washing deadly radiation into the drinking water supply beneath Yucca Mountain in an unacceptably short period of time, just centuries or a few thousand years into the future. (Of course, sacrificing coming generations further into the future is just as unacceptable; the waste will remain deadly for many hundreds of thousands of years.) DOE never responded to the petition's charge that Yucca Mountain violates its own Site Suitability Guidelines, but merely responded that it needed more time to study the site. Rather than address the petition, in the summer of 1999 DOE proposed to change its own Siting Guidelines, to simply remove the specific water flow rate disqualifying condition, as well as all other disqualifying conditions. One and a half years ago, NIRS and numerous environmental, safe energy, and public interest groups and concerned citizens submitted official comments opposing DOE's proposed Site Suitability Guidelines change. Like the three year old petition that has gone unanswered, these public comments are gathering dust on a shelf as DOE hastily rushes through this "final public comment period," in an obvious bid to give the thumbs up to Yucca Mountain in the near future despite the site's unsuitability. How can the public have any confidence whatsoever in such a rigged and fatally flawed process?

This is but one instance in a long tradition of changing the rules in the middle of the game at Yucca Mountain, weakening environmental protections and lowering regulatory standards to keep the unsuitable site in the running.

U.S. Environmental Protection Agency (EPA) standards have been gutted more than once to keep the wayward Yucca Mountain Project moving ahead. As acknowledged by DOE in its own May 2001 "Yucca

Mountain Science and Engineering Report," the NWPA granted EPA the role and responsibility "to set public health and safety standards for releases of radioactive materials from a repository." (Executive Summary, page 1) How then has DOE, NRC, the nuclear power industry and even Congress itself gotten away, time and time again, with pressuring EPA to weaken Yucca environmental standards?

In the mid-1980's, EPA promulgated generic repository radiation standards, to be applied to any proposed national burial site for high- level radioactive waste. EPA set a limit for how much deadly radioactive gas would be permitted to escape a proposed repository. A short few years later, DOE discovered that Yucca Mountain could not live up to EPA's standard. Well-strapped nuclear power industry lobbyists sat down with their friends in Congress, and lo' and behold, Congress changed the law, ordering EPA to re-write "reasonable" – that is, weaker -- "site-specific" repository regulations that Yucca Mountain can live up to. Dr. Arjun Makhijani of Institute for Energy and Environmental Research, who sat on the EPA advisory panel for the generic repository rule, calls the weakened, Yucca-specific EPA regulations "the double standard standard."

How can the public swallow federal Yucca Mountain "science" when raw politics has driven the process from the start?

Before it can give Yucca its thumbs up, DOE must find that the site can live up to EPA's weakened radiation protection standards. To their utter discredit, DOE and NRC, rather than serving as objective, unbiased agencies, actively lobbied behind closed doors, alongside the nuclear power industry, pressuring EPA to further weaken its Yucca Mountain regulations. In the end, EPA promulgated standards that in effect would create an 11 mile long nuclear sacrifice zone downstream of Yucca Mountain, within which any level of radioactive contamination is "legal". Through "fuzzy math," EPA assumed that a huge quantity of uncontaminated groundwater would magically mix with contaminated plumes from Yucca Mountain as it would be drawn up in well water, making it "safe enough" for future generations of "dose receptors" (also known as downstream farming families) to drink, to water their livestock, and to irrigate crops. EPA arbitrarily cut off any and all regulations at the 10,000 year mark, while the radioactive waste will remain deadly for hundreds of thousands of years beyond that. DOE itself admits that peak doses to the public downstream from Yucca Mountain would hit between 100,000 and 300,000 years into the future. Don't those future generations count? How can the federal government knowingly condemn future generations to inescapable radioactive poisoning? If the site is guaranteed to leak, this violates the very intent of geologic disposal, that radioactive waste be isolated from the living environment for the full duration of its deadliness. It's plain common sense to regulate high-level radioactive waste for the full duration of its hazard.

NIRS/WISE and other national and grassroots organizations, as well as the State of Nevada, are currently suing the EPA for having set an unacceptably weak standard that relies on delay of release and dilution rather than permanent isolation of radioactivity at the proposed repository. The DOE should not move forward with site recommendation while these legal contentions are unresolved.

The Elephant in the Living Room:

Why Won't DOE Address Nuclear Waste Transportation?

How can DOE recommend moving ahead with the Yucca Mountain site when its analysis of the environmental impacts of the inescapable transportation component is utterly lacking? Before recommending that a nuclear waste dump be developed at Yucca Mountain, DOE must assess in detail the large scale impacts of transporting 77,000 tons of high-level radioactive waste thousands of miles across the country, through 43 States, past the homes, schools, and workplaces of 50 million Americans, to Nevada. The suitability of Yucca Mountain for a nuclear waste repository is inextricably linked to transporting tens of thousands of high-level atomic waste truck and train shipments to the proposed site over the course of several decades. Therefore, the Secretary of Energy should not be considering a site recommendation in the absence of such basic information as how waste would be transported and which routes would be used.

Initially, DOE scheduled just over a dozen public hearings on the Yucca Mountain DEIS, almost all of them in Nevada. NIRS, along with other organizations and concerned citizens, urged DOE to hold hearings in the dozens of transportation corridor States across the country that would be critically impacted by high-level atomic waste shipments bound for Yucca Mountain. DOE at first stubbornly refused to hold such hearings, even in such places as Chicago: over 35,000 shipments bound for Yucca Mountain could pass through Illinois. Only by fighting tooth and nail, and involving Members of Congress, did organizations such as NIRS

pressure DOE into holding a hearing in Chicago at all. As it was, such hastily arranged last minute hearings gave the public very little notice to take part – the public in Lincoln, Nebraska had only 11 days notice. Most States through which high- level nuclear waste would be transported to Yucca Mountain did not have the benefit of a DEIS hearing.

Energy Secretary Abraham, while serving as Senator from Michigan, wrote a letter on August 27, 1998 to then-Secretary of Energy Bill Richardson. Abraham informed Richardson that local elected officials and residents of Michigan were unaware of their opportunity to comment on a proposed shipment of experimental weapons-grade plutonium fuel from Los Alamos, New Mexico to Chalk River Nuclear Lab, Ontario, Canada via Michigan. Abraham wrote that "it is imperative that a public hearing be conducted," and that "to not do so would be irresponsible and offensive to Michigan residents." Abraham concluded "I am sure you will agree that the ramifications of an accident are too serious to consider anything less than the very best emergency response preparedness." DOE refused to hold hearings, and rushed the shipment through in the dead of night, violating environmental laws in the process.

Now-Energy Secretary Abraham's previous statement is most ironic, given DOE's current hastily announced Preliminary Site Suitability Evaluation hearings and woefully short public comment period. Millions of local elected officials and residents in 43 States along Yucca Mountain transport routes – thousands of whom submitted public comments during the Yucca Mountain DEIS hearings and have not yet heard back from DOE – are not even aware that October 19th ends their opportunity to comment on the proposed large scale shipments of high-level radioactive waste past or through their

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community. It is imperative that public hearings be conducted in all the transport corridor communities that DOE ignored during its flawed DEIS process. In Secretary Abraham's own words, "to not do so would be irresponsible and offensive" to millions of Americans, and their elected representatives, that would be impacted by Yucca Mountain shipments. Presently, DOE plans a grand total of zero public hearings in the 42 transportation corridor States outside Nevada before it closes its final public comment period on the Yucca Mountain proposal.

DOE's impact analyses on high-level nuclear waste transport are sorely lacking. A severe transport accident on our roads, rails, or waterways, such as the July 18, 2001 high-temperature, long duration Baltimore train tunnel fire, could release radiation from the physically- untested transport containers. Dr. Marvin Resnikoff of Radioactive Waste Management Associates, using DOE's own computer models, has shown that such a radiation release in an urban setting could cost tens or even hundreds of billions of dollars to clean up, and could cause 115 latent cancer fatalities, not to mention other adverse health impacts.

DOE's analyses of radiation doses to the public from routine, "incident-free" shipments do not adequately address the threat of contamination hot spots on the exterior of transportation containers. Over 25% of French high-level waste shipments before 1998 involved contaminated containers violating dosage regulations. Some containers in France emitted hundreds to thousands of times the permissible dose. In the U.S., 49 contamination incidents were reported by the Atomic Energy Commission and DOE between 1949 and 1996. High-level atomic waste shipments are like mobile x-ray machines that cannot be turned off rolling down our roads and rails, contaminated ones only more so. Certain people, such as pregnant women, must avoid any avoidable radiation exposures. It has been known since the 1950's that a single x-ray dose to a fetus in the womb doubles that child's chances of contracting leukemia. DOE has not adequately addressed the possibility of pregnant women getting stuck in a traffic jam next to a high-level nuclear waste truck, or living next to a railway transfer station where nuclear waste trains might park for extended periods of time, to name just a couple "routine exposure" scenarios that could have nightmarish consequences.

DOE has inadequately analyzed the environmental justice impacts of its proposed transport scheme. Who lives along railway tracks and interstates many times? Is it not low-income, minority communities?

DOE has inadequately analyzed the impacts on property values its transport scheme would cause. In New Mexico, a judge and jury found that property values decreased due to fear of nuclear waste even before shipments began, awarding a family owning land along the transport route to DOE's Waste Isolation Pilot Plant $337,000 in damages. In Utah, the Realtors Association conducted a survey showing that property values could fall as much as 15% along a nuclear waste rail route, amounting to $5 billion in lost value.

DOE has inadequately analyzed emergency response preparedness in the event of a radioactive waste

transport accident. Some 80% of fire fighters in rural areas are volunteers. Are they trained and equipped to deal with a radiological emergency? Shipments bound for Yucca Mountain would pass through many thousands of miles of rural areas in scores of States.

There is very little, if any, experience in the U.S. with transporting damaged nuclear fuel rods long distances. In what condition are the nuclear fuel rods that are presently immersed in wet storage pools and contained in dry storage casks across the U.S.? How will damaged fuel rods stand up during severe transport accidents? How badly will undamaged fuel rods become damaged during transport? DOE has not adequately addressed such vital questions.

For all of these reasons, DOE's Yucca Mountain transport impact analyses are far from adequate. DOE cannot "segment" the inescapable transportation impacts apart from the rest of the Yucca Mountain proposal without violating the National Environmental Policy Act. For Energy Secretary Abraham to give the thumbs up to Yucca Mountain without addressing transportation would violate the letter and the spirit of environmental law.

9/11: Nuclear Waste Transportation, Terrorism, and Yucca Mountain

In its Yucca Mountain DEIS, DOE devoted a mere single page (6.2.4.2.3, Impacts of Sabotage, page 6-33 to 6-34) of coverage to potential impacts from terrorist attacks targeted at nuclear waste shipments. The horrific terrorist attacks of 9/11/2001 require that DOE completely re-evaluate the risk of terrorism or sabotage targeted at high-level radioactive waste shipments bound for Yucca Mountain.

The day after the 9/11 terrorist attacks, Energy Secretary Abraham suspended DOE nuclear materials and atomic waste shipments, thereby acknowledging that radiological shipments are potential terrorist targets. Indeed, a primary focus of the federal investigation into the 9/11 attacks has been the "clear and present danger" of additional terrorist attacks, especially biological, chemical, or radiological attacks. Alleged accomplices have been found to possess permits for hauling hazardous and radioactive materials. Given that the United States is still under threat from terrorism, and that radioactive waste is potentially a primary target, DOE's current resumption of nuclear waste transportation is rash, irresponsible, and reckless. The moratorium on nuclear waste shipments should be reinstated, expanded to cover commercial shipments as well as DOE shipments, and extended indefinitely.

Proposals for shipping tens of thousands of high-level radioactive waste containers by train and truck through 43 States past the homes of 50 million Americans to Yucca Mountain, Nevada must be entirely re- examined in light of the 9/11 attacks. Such large scale movement of radioactive waste on the roads, rails, and waterways would create tens of thousands of potential targets, in virtually any scenario a terrorist might choose: urban, suburban, or rural settings; near schools, chemical plants, nuclear reactors, hospitals, or large metropolitan areas.

Often, DOE speaks confidently of "...the degree of safety provided by shipping casks certified by the U.S. Nuclear Regulatory Commission for the transportation of spent nuclear fuel." (DEIS, page 6-29). But, in a response to the 9/11 terrorist attacks, NRC admitted that "the capacity of shipping casks to withstand such a [large aircraft] crash has not been analyzed." (NRC Office of Public Affairs, NRC web site, 9/21/01) In fact, analyses performed at Sandia National Labs in New Mexico for the NRC in the late 1970's and early 1980's clearly showed that nuclear waste transportation containers are vulnerable to attack by terrorists wielding portable rocket launchers. Such weaponry has only become more powerful and accessible in the past 20 years. It is an invitation to disaster for DOE to rush forward with Yucca Mountain while not addressing potential terrorism and sabotage against nuclear waste shipments.

In the aftermath of 9/11, proposals for centralized storage of nuclear waste should be shelved indefinitely. In addition to the dangers of transporting radioactive waste, a centralized storage facility would itself be an obvious and difficult-to-secure target. The current proposals for centralized storage at Yucca Mountain would establish an additional large scale radiological target without meaningfully reducing the risk at operating atomic power plants, in that those reactors' on-going operations and on-site waste generation would continue to make them potential terrorist targets as well. The proposal for permanent storage at Yucca Mountain, Nevada, would irresponsibly create a significant target close to the fastest growing city in the country. Las Vegas would be downwind of any radioactive fallout in the event of a fire or explosion. DOE's design proposal for Yucca Mountain features massive, exposed surface operations, which would establish large and devastating targets for attack. Given the massive quantities of waste that could be stored in the proposed

5,000 ton irradiated fuel storage pool on the surface at Yucca Mountain, a successful terrorist attack there could expose not just Las Vegas, but a vast area of the Western United States, to severe radioactive contamination.

A Whole Lot of Shaking Going On: Earthquakes at Yucca Mountain

Dozens of earthquake fault lines are in the vicinity of Yucca Mountain, a couple passing directly through the proposed repository site. 625 earthquakes registering more than 2.5 on the Richter Scale have struck within 50 miles of Yucca Mountain in the past 25 years alone. In June, 1992 a 5.6 earthquake, epicentered less than ten miles from Yucca Mountain, did a million dollars damage to the DOE field office studying the Yucca Mountain site. Rather than listen to that "message from above," DOE has ignored the earthquake risks. In October, 1999 an earthquake in Nevada derailed a train on a railway route that would be used to haul high-level nuclear waste to Yucca Mountain. DOE's current design for surface facilities includes irradiated fuel storage pools that could hold 5,000 tons of high-level radioactive waste. A major earthquake that breached such pools, draining the cooling water, could lead to a fuel fire, fuel meltdown, and catastrophic radiation release. If dry cask storage is used on the surface of Yucca Mountain before waste would be buried underground, could not a major earthquake tip over dry cask storage containers, blocking their cooling vents? What if the containers could not be righted before the fuel inside overheated? Could not a major earthquake also collapse tunnels beneath Yucca Mountain, breaching the three inch thick container shell, releasing the deadly waste inside? Could not a major earthquake create new fissures that could channel larger amounts of water downward, into contact with the waste containers, corroding them and washing radiation into the drinking water supply below?

Nukespeak: NRC/DOE, Risk/Dose, Volcanoes/Yucca Mountain

Standing atop Yucca Mountain and looking west, one can see a line of volcanic cones stretching off to the distance. The closest cinder cone is just several miles across the valley from Yucca Mountain. If a volcano were to erupt into a waste repository at Yucca Mountain, the consequences downwind and downstream would be catastrophic. NRC figures that a consequent dose to people living downwind would be 10,000 rems per year. DOE figures the annual dose would be between 1,000 and 10,000 rems. These are deadly doses, violating EPA's permissible Yucca Mountain dose of 15 millirem per year by many orders of magnitude.

Granted, the probability of a volcanic eruption through the repository is low. NRC estimates the chances are 1 in 10 million per year. DOE thinks it even lower, 1 in 100 million per year. Why then, do NRC and DOE go way out of their way to conceal the actual consequences were a volcanic eruption to occur?

As Steve Frishman, Technical Policy Coordinator for the Nevada Agency for Nuclear Projects, has pointed out in a paper entitled "NRC'S RISK-INFORMED, PERFORMANCE-BASED REGULATORY APPROACH DISTORTS SAFETY ASSESSMENT OF A POTENTIAL YUCCA MOUNTAIN HIGH-LEVEL NUCLEAR WASTE REPOSITORY," (summer, 2001) NRC and DOE have twisted ordinary definitions of words to conceal the true consequences that would result if a volcano were to erupt at Yucca Mountain.

NRC and DOE speak only of a peak probability modified "expected annual *dose*" (they actually mean *risk*) of about 1 millirem (0.001 rem) per year at the time of the volcanic disturbance. In its May 2001 "Yucca Mountain Science and Engineering Report," DOE misleadingly states "Performance assessment results to date show that potentially disruptive events are not likely to compromise the performance of the repository, and *the probability-weighed mean dose for an igneous disruption is low.*" (emphasis added) (Executive Summary, page 19)

But if the risk modifying factor, the 10-7 probability of occurrence, is removed, the expected annual maximum dose is 10,000 rems (104 rems). EPA has established an all pathways maximum individual *dose (not risk)* of 15 millirems (0.015 rem) per year for a Yucca Mountain repository compliance limit, which is to be applied in NRC's consideration of a Yucca Mountain repository license application.

The public has the right to know and understand the true potential consequences of a volcanic eruption at Yucca Mountain. NRC and DOE should not only be ashamed of, they should be forbidden from, concealing such information from the public through deception.

Federal nuclear authorities have deceived the people of Nevada before. In his book The Day We Bombed Utah, John G. Fuller quotes a U.S. Atomic Energy Commission (AEC) bulletin appearing to compromise the safety of people living near the Nevada Test Site, where AEC began "testing" nuclear weapons in 1951:

"This bulletin will prescribe the level which is safe for the general public, and will then recommend that the public be subjected to only one-tenth of this safe value, except for Nevada, which can be given the full permissible dose. The discussion recognized that this would have a very bad psychological effect on the people of Nevada. I suggested that in view of the problems such an issuance would create, especially among the people of Nevada, a better approach would be to state the permissible level and then state that only one-tenth of this should be allowed in areas not subjected to controlled conditions, and that the Nevada tests are conducted under controlled conditions..." Given its bad reputation, Congress disbanded AEC in the mid-1970's, replacing it with DOE and NRC. Many of the same people who had worked at AEC simply went to work at DOE and NRC. Shamefully and unacceptably, it appears that AEC's past deceptive practices are sometimes still employed at DOE and NRC, as well.

A Mountain of Uncertainty

In her 1993 book Burying Uncertainty: Risk and the Case Against Geological Disposal of Nuclear Waste, K. S. Shrader-Frechette asserts that burying high-level radioactive waste at Yucca Mountain is profoundly misguided on scientific grounds because we cannot trust the accuracy or precision of 10,000-year predictions to guarantee isolation of the waste from the biosphere. Given that the wastes will remain deadly for hundreds of thousands and even a million years, the uncertainty of geologic isolation is even more monumental. She points out the many questionable non-scientific "expert value judgements" used to support moving forward with Yucca Mountain. Federal and industry scientists and engineers spoke with great confidence about

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how the Maxey Flats, Kentucky "low level" atomic waste dump would hold in radioactive poisons for centuries or thousands of years. Just ten short years later, nuclear poisons were found moving off-site in the groundwater.

In a more recent example of reality shattering the illusion of confident predictions, NRC stated in the late 1980's and early 1990's that dry cask storage containers would perform safely for up to a century. Manufacturing defects and operational errors have led to unforeseen degradation of dry cask storage containers not in a century, but in just a few years time. In a spectacular incident, an explosion dislodged a 4,000 pound cask lid on a fully loaded dry cask storage container at Point Beach nuclear plant in Wisconsin in May, 1996 due to an unforeseen chemical reaction that was missed by all the "experts" at NRC, the cask manufacturing company, and the nuclear utility. Wouldn't the same companies that manufacture dry storage casks be hired to manufacture transportation containers and Yucca Mountain emplacement containers? How, then, can DOE claim with any certainty or confidence that only one of its proposed burial containers will fail, and that not until 11,000 years into the future? That assumes perfection in design and manufacture! Suspiciously, 11,000 years is just beyond the arbitrary 10,000 year cut off point for regulatory oversight at Yucca Mountain. Didn't DOE originally claim the containers would last for much longer periods of time? Shrader-Frechette also points out that going forward with Yucca Mountain is ethically bankrupt, because it ignores the rights of present and future generations to equal treatment, due process, and free informed consent.

DOE seems uncertain even of which design for the repository it intends to use. DOE's "evolving/flexible design" seems intended to avoid answering whether or not the waste can be contained given the ever-more-apparent unsuitability of the Yucca Mountain site. A seldom talked about, but major, shift is that the geology of Yucca Mountain cannot be relied on the offer substantial isolation of the waste: the engineered barriers are now looked to for that long-term isolation. It is dreadfully and dangerously uncertain they can provide it.

One Thing Seems Certain: Spencer Abraham's personal history on Yucca Mountain

Before being appointed Energy Secretary, Spencer Abraham was a U.S. Senator from Michigan. Every single time he had a chance to vote in favor of sending the nation's high-level nuclear waste to Nevada as soon as possible, he did. In early 2000, during Senate consideration of a bill that would have lowered environmental protections at the proposed Yucca Mountain repository, NIRS' nuclear waste specialist Kevin Kamps, himself a Michigan constituent, contacted Senator Abraham's office to discuss concerns about the proposal and its related nuclear waste transportation impacts. Senator Abraham's staff person replied that his office would not be interested to discuss such matters, and hung up. Senator Abraham voted in favor of Senate Bill 1287 on February 10th, 2000, and after President Clinton vetoed the bill on April 25, 2000, Senator Abraham

voted to override the veto.

President George W. Bush unveiled his National Energy Policy in a speech delivered on May 16, 2001 in St. Paul, Minnesota. Standing beside him were Energy Secretary Abraham and EPA Administrator Christie Todd Whitman. Citing the need to solve the nuclear waste problem so that new reactors could be built in the U.S., Bush called on his two Cabinet members to expedite the process for opening a national nuclear waste repository. Bush failed to mention that there is only one site under consideration, Yucca Mountain. Just a few weeks later, EPA released its unacceptably weak Yucca Mountain radiation standards. Not long thereafter, DOE announced that it would make its Yucca Mountain Site Recommendation decision by the end of the year, or early next year, despite how woefully premature such a decision would be (see above). All indications are the decision will be to go ahead with the dump, despite the site's scientific unsuitability.

In mid-July, 2001 President Bush deployed his Cabinet across the U.S. to promote his energy plan. Energy Secretary Abraham was sent to Illinois, to hold an "Energy Town Hall Meeting," to hear from the American people what they felt and thought about energy issues. The event was very hastily arranged, with only one business day's notice to the public. The "Town Hall Meeting" was held at DOE's Argonne National Lab, an intimidating, heavily-fortified federal facility 30 miles from downtown Chicago, inaccessible via public transit. Tickets were required to attend the "Town Hall Meeting." They were limited in number and very difficult to come by, requiring a visit to the local Republican U.S. Representative's office in the immediate vicinity of Argonne during business hours. NIRS representatives managed to obtain tickets, and intended to speak to Secretary Abraham concerning Yucca Mountain, nuclear waste transportation, and nuclear power. They were nonetheless denied entry. In fact, an Argonne security guard physically ripped the tickets out of a NIRS representative's hand. DOE Security then called the DuPage County Sheriff's Department. Sheriff's deputies threatened to arrest NIRS representatives for trespassing unless they left immediately. When asked "What about the Town Hall Meeting," a DOE security guard responded "well, it's not really a public meeting."

Clearly, Spencer Abraham's decision-making on Yucca Mountain thus far has been based on political considerations, and divorced from sound science and public participation (also known as democracy). Because of his Senate voting record and evident predisposition toward Yucca Mountain, Secretary Abraham should recuse himself from any further decisions on this proposed project.

A Chaotic and Confusing Final Round of Public Comment and Public Hearings

The NWPA establishes the public's right to participate in the process for consideration of repository site recommendation. But as the last public hearings and the deadline for final comments approaches, the public still does not have access to many key regulations, analyses, and documents upon which it is supposed to comment (see above). By rushing the final comment period and public hearings prior to the release of these key documents, the DOE has undermined any meaningful public participation in the Yucca Mountain site recommendation decision.

DOE gave Las Vegans a whopping nine business days' notice prior to the September 5th public hearing. Just over a week, to review and prepare comments on 20 year's worth of documentation? Of course, announcing the hearing just before Labor Day, and holding it two days after Labor Day, served to minimize public participation. DOE then decided to go forward with the Las Vegas hearing, despite a last-minute change in venue, and an inaccurate address printed in the Federal Register. The location where DOE held the hearing was inaccessible by public transit. DOE's venue of choice, its intimidating Nevada Test Site operations center, with its barbed wire fences and heavy security, also served to minimize public participation. A standing room only crowd of several hundred still turned out, almost all passionately opposed to Yucca Mountain. DOE should have learned from the standing room only, overflow crowd at its January 2000 DEIS hearing in Las Vegas that turn-out would be huge. Instead, DOE held the Preliminary Site Suitability Evaluation (PSSE) Las Vegas hearing in a room too small to accommodate the crowd that attended. Scores of people were reportedly denied their opportunity to give oral comments, and went home rather than wait till the middle of the night to deliver them.

After the September 11 terrorist attacks, DOE postponed its 9/12 and 9/13 PSSE hearings for Pahrump and Amargosa Valley to 9/24, less than two weeks later and amidst the Jewish holidays of Rosh Hashannah and Yom Kippur. DOE also scheduled the two hearings simultaneously, so that if someone was unable to attend that day, they had no alternative hearing to attend. An uproar from elected officials and concerned citizens in Nevada, calling for more time to mourn, heal, and recover from the national disaster, led DOE to postpone

the hearings yet again, to October 10th and 12th. The final comment deadline has likewise shifted, from September 20th, to October 5th, to October 19th. The 29 "field hearings" announced by DOE on September 28th have given Nevadans at most a week's notice to attend. No one should be surprised if participation is minimal, given such short notice. These many changes have led to tremendous confusion and chaos. Even the October 19th deadline is unacceptably short. DOE should give the public at least 180 days past the publication date of the last of several key missing documents – such as the FEIS, the Site Suitability Guidelines, NRC's Sufficiency Report and Licensing Rule – before scheduling a final comment period and public hearings. DOE's arbitrarily rushed schedule should not undermine meaningful public participation.

An Ounce of Prevention is Worth a Pound of Cure:

Stop making nuclear waste in the first place!

About 43,000 tons of highly radioactive commercial atomic waste exists presently in the U.S. Every year, operating reactors add about 2,000 more tons to that total. If the 103 reactors presently operating continue generating nuclear waste until the end of their current 40 year licenses, the amount of irradiated nuclear fuel will double to 86,000 tons. Growing numbers of reactors are receiving rubber stamp license extensions for an additional 20 years of operations, which will add tens of thousands of tons more waste. The Bush/Cheney energy plan calls for building new reactors, which would add more waste. Yucca Mountain is legally limited to accept a maximum 70,000 tons of waste. Where would the next dumpsite be targeted?

There are alternative sources of electricity that do not generate high-level radioactive waste. It is time for the U.S. to launch a massive, fast-track program to exploit the vast potential of energy conservation and efficiency. As California has already successfully done, the U.S. can and must dramatically increase use of renewable energy resources, many of which are cheaper than new reactors. These technologies are ready today. Further, we must step up support for the energy technologies of the future, with an eye toward ensuring their commercialization take place as soon as possible. These technologies include microturbines and fuel cells, which enable buildings to be off the grid. In a few years, with adequate backing, these technologies, which are virtually non-polluting, can take the place of tens of thousands of megawatts of existing centralized power supply, and instead produce the same amount of electricity, cost-effectively, without generating nuclear waste or global warming gases. After all, if solar panels and wind turbines are reliable and cost-effective enough to run Yucca Mountain repository ventilation fans for centuries into the future (DOE, Supplement to the Draft Environmental Impact Statement...for a Geologic Repository...at Yucca Mountain, 2.3.2.4.4 Electric Power, page 2-18, May 2001), wouldn't it make sense to use them right now to generate electricity for our homes and factories so we don't generate nuclear waste in the first place?

Thank you for considering these comments. We look forward to your response.

Sincerely,

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The ZHABA Collective PF. 701/178 H-1399 Budapest, Hungary email: zhaba@ecn.cz www.zhaba.cz "Dip a slice of bread in batter. That's September; yellow, gold, soft, and sticky. Fry the bread. Now you have October; chewier, drier, streaked with browns." Skinny Legs and All - Tom Robbins